Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	1
Date	20-May-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1718
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	638
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1682
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	602
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	- 2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	36
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	34
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_{bi}$)	(%)	W_a/ SbX100	5.33

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	674.00	16.85	16.85	83.15	72-100	
3	9.50	433.00	10.83	27.68	72.33	70-88	
4	4.75	232.00	5.80	33.48	66.53	53-71	
5	2.36	482.00	12.05	45.53	54.48	42-58	
6	1.18	344.00	8.60	54.13	45.88	34-48	
7	0.60	435.00	10.88	65.00	35.00	26-38	
8	0.30	432.00	10.80	75.80	24.20	18-28	
9	0.15	382.00	9.55	85.35	14.65	12-20)	
10	0.08	362.00	9.05	94.40	5.60	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	2
Date	20-May-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1678
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	598
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1644
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	564
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	- 2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	34
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	32
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_b$)	(%)	W_a/ SbX100	5.35

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	662.00	16.55	16.55	83.45	72-100	
3	9.50	412.00	10.30	26.85	73.15	70-88	
4	4.75	231.00	5.78	32.63	67.38	53-71	
5	2.36	481.00	12.03	44.65	55.35	42-58	
6	1.18	311.00	7.78	52.43	47.58	34-48	
7	0.60	416.00	10.40	62.83	37.18	26-38	
8	0.30	378.00	9.45	72.28	27.73	18-28	
9	0.15	368.00	9.20	81.48	18.53	12-20)	
10	0.08	360.00	9.00	90.48	9.53	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	3
Date	23-May-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1645
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	565
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1613
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	533
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	- 2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	32
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	30
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_b$)	(%)	$W_a / SbX100$	5.31

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	662.00	16.55	16.55	83.45	72-100	
3	9.50	412.00	10.30	26.85	73.15	70-88	
4	4.75	231.00	5.78	32.63	67.38	53-71	
5	2.36	481.00	12.03	44.65	55.35	42-58	
6	1.18	311.00	7.78	52.43	47.58	34-48	
7	0.60	416.00	10.40	62.83	37.18	26-38	
8	0.30	378.00	9.45	72.28	27.73	18-28	
9	0.15	368.00	9.20	81.48	18.53	12-20)	
10	0.08	360.00	9.00	90.48	9.53	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	4
Date	23-May-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_a)	gm	w_{sb}	1662
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	582
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1629
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	549
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	33
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	31
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_B$)	(%)	W_a/ SbX100	5.33

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation
2	13.20	665.00	16.63	16.63	83.38	72-100	satisfies the
3	9.50	417.00	10.43	27.05	72.95	70-88	MORT&H
4	4.75	232.00	5.80	32.85	67.15	53-71	Grade II
5	2.36	490.00	12.25	45.10	54.90	42-58	Specificati
6	1.18	314.00	7.85	52.95	47.05	34-48	on for
7	0.60	419.00	10.48	63.43	36.58	26-38	Bituminous
8	0.30	382.00	9.55	72.98	27.03	18-28	Concrete
9	0.15	380.00	9.50	82.48	17.53	12-20)	
10	0.08	370.00	9.25	91.73	8.28	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	5
Date	24-May-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1732
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	652
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1695
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	615
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	37
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	35
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_B$)	(%)	W_a/ SbX100	5.37

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specificati on for Bituminous Concrete
2	13.20	671.00	16.78	16.78	83.23	72-100	
3	9.50	419.00	10.48	27.25	72.75	70-88	
4	4.75	235.00	5.88	33.13	66.88	53-71	
5	2.36	487.00	12.18	45.30	54.70	42-58	
6	1.18	322.00	8.05	53.35	46.65	34-48	
7	0.60	425.00	10.63	63.98	36.03	26-38	
8	0.30	379.00	9.48	73.45	26.55	18-28	
9	0.15	382.00	9.55	83.00	17.00	12-20)	
10	0.08	373.00	9.33	92.33	7.68	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	6
Date	24-May-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1717
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	637
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1681
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	601
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	36
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	34
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_B$)	(%)	W_a/ SbX100	5.34

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	665.00	16.63	16.63	83.38	72-100	
3	9.50	419.00	10.48	27.10	72.90	70-88	
4	4.75	235.00	5.88	32.98	67.03	53-71	
5	2.36	492.00	12.30	45.28	54.73	42-58	
6	1.18	318.00	7.95	53.23	46.78	34-48	
7	0.60	426.00	10.65	63.88	36.13	26-38	
8	0.30	385.00	9.63	73.50	26.50	18-28	
9	0.15	382.00	9.55	83.05	16.95	12-20)	
10	0.08	370.00	9.25	92.30	7.70	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	7
Date	20-Jun-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1828
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	748
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1793
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	713
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	42
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	40
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_{bi}$)	(%)	W_a/ SbX100	5.35

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	674.00	16.85	16.85	83.15	72-100	
3	9.50	433.00	10.83	27.68	72.33	70-88	
4	4.75	232.00	5.80	33.48	66.53	53-71	
5	2.36	482.00	12.05	45.53	54.48	42-58	
6	1.18	344.00	8.60	54.13	45.88	34-48	
7	0.60	435.00	10.88	65.00	35.00	26-38	
8	0.30	432.00	10.80	75.80	24.20	18-28	
9	0.15	382.00	9.55	85.35	14.65	12-20)	
10	0.08	362.00	9.05	94.40	5.60	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	8
Date	20-Jun-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1842
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	762
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1808
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	728
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	43
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	41
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_B$)	(%)	W_a/ SbX100	5.38

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	662.00	16.55	16.55	83.45	72-100	
3	9.50	412.00	10.30	26.85	73.15	70-88	
4	4.75	231.00	5.78	32.63	67.38	53-71	
5	2.36	481.00	12.03	44.65	55.35	42-58	
6	1.18	311.00	7.78	52.43	47.58	34-48	
7	0.60	416.00	10.40	62.83	37.18	26-38	
8	0.30	378.00	9.45	72.28	27.73	18-28	
9	0.15	368.00	9.20	81.48	18.53	12-20)	
10	0.08	360.00	9.00	90.48	9.53	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Quality of Bitumen

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Dense Graded Bituminous Macadam
Contractor	Sri A Chennareddy
Test Method	IS : 73 – 1992 & Specification for Road & Bridge Works, MORT&H, Revision IV.
Grade of Bitumen	60 / 70
Location	Hot Mix Plant
Material	Bitumen
Sample No	1
Date	15-Jun-2018

Sl. No.	Description	Test Results	Requirement as per IS:73 - 1992
1	Penetration at 25^0C , 1 / 10 mm	68	60 – 70
2	Softening Point, (^{0}C)	53	45 – 55
3	Specific Gravity	1.1	Min. 0.97
4	Ductility at 27^0C, in cm	80	Min. 75
5	Flash Point, (^{0}C)	183	Min. 175

Note:

i. The results indicated above are based on the tests carried out on the sample at site.
ii. The results relate only to the items tested.
iii. This test report should not be reproduced except in full, without written approval of this laboratory.
iv. Any query regarding the report must be reported immediately.

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Z.
Bangalore

Test Report
Quality of Bitumen

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/02
Mix Type	Dense Graded Bituminous Macadam
Contractor	Sri A Chennareddy
Test Method	IS : 73 – 1992 & Specification for Road & Bridge Works, MORT&H, Revision IV.
Grade of Bitumen	60 / 70
Location	Hot Mix Plant
Material	Bitumen
Sample No	2
Date	15-Jun-2018

Sl. No.	Description	Test Results	Requirement as per IS:73 - 1992
1	Penetration at 25^0C , 1 / 10 mm	66	60 – 70
2	Softening Point, (^{0}C)	50	45 – 55
3	Specific Gravity	1.1	Min. 0.97
4	Ductility at 27^0C, in cm	81	Min. 75
5	Flash Point, (^{0}C)	181	Min. 175

Note:

i. The results indicated above are based on the tests carried out on the sample at site.
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For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore